October 31, 2022

Des Gillen
President
BP-Husky Refining LLC
4001 Cedar Point Road
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City of Toledo
Division of Environmental Services
348 S. Erie Street
Toledo, OH 43604
Attn.: Peter Park

RE: Title V Quarterly Deviation Report – 3rd Quarter 2022

Dear Peter:

The Title V Permit (P00128721) issued to BP-Husky Refining LLC Toledo Refinery (BPH) effective on November 18, 2021, requires reports to be submitted quarterly outlining known deviations of emission limitations, operational restrictions, or control device operating parameter limitations. The permit also requires semi-annual reports outlining deviations of requirements in the permit, principally the monitoring, recordkeeping, and reporting (MRR) requirements. The permittee chooses to report known MRR semi-annual deviations identified during the quarter in its quarterly deviation report.

This letter and its attachments constitute the Title V Deviation Report reflecting the deviations identified during the third quarter of the 2022 calendar year (July 1 through September 30, 2022), including MRR deviations identified at the time of this report that are required to be reported semi-annually. The requirement for these reports is contained in Part A. of the Title V Permit as Standard Term and Condition, A.2.c. This report also satisfies the requirement for such reporting in OAC Rule 3745-77-07(A)(3)(c).

In order to consolidate reports, this letter and its attachments also constitute the deviation reports for all the Permits to Install (PTIs) that have been incorporated into the Title V Permit and that have PTI requirements for deviation reporting. All known deviations of the Title V Permit and currently effective PTIs are presented in the attached quarterly deviation report. The following also provides some additional background on a few of the issues relevant to this report in addition to the Toledo Integrated Unit (TIU) Turnaround (TAR).

Toledo Integrated Unit (TIU) Turnaround (TAR):

BPH's Toledo Integrated Unit (TIU) recently completed an extended maintenance turnaround (TAR), which is a planned event that consists of bringing down a large portion of the refinery. The recent TIU TAR started on April 20, 2022 and was completed on August 8, 2022.

As part of the planned startup following the TAR, there were excess emissions from the Sulfur Recovery Units (SRUs). This is not a violation of 40 CFR 60 Subpart Ja, pursuant to 40 CFR 60.8(c), which states that emissions during startup, shutdown, and malfunction

shall not be considered a violation of the applicable emissions limit unless otherwise specified in the applicable standard. BPH has included these in this report as Title V deviations only.

As part of the planned startup, the FCCU Regenerator flue gas was routed through the bypass stack per normal start up procedures. During start-up of the FCCU, the FCCU Regen is routed through the FCCU bypass stack, and the CO Boiler is only fired with refinery fuel gas and/or natural gas with the combustion flue gas exiting through the CO Boiler Stack (this mode of operation is referred to as “dual stack operation”). On the morning of July 30th, BPH discovered that the 96” butterfly valve that enables the FCCU Regen flue gas to enter the CO Boiler had become stuck in the closed position preventing FCCU Regen flue gas from entering the CO Boiler. BPH operated in this mode for a period of time, as reported in the planned maintenance notification and follow up notifications sent to TDES and OEPA on June 30, 2022 and August 3, 2022. During this period the CO Boiler was firing harder on RFG and exceeded the rolling 365-day NOx limit (58.1 ppm) for the FCCU. This deviation is included in this report.

Reporting of CEM Deviations:

Prior to 2Q 2016, BPH had been reporting continuous emission monitor (CEM) downtimes and out-of-control times in Title V deviation reports as well as in CEMS summary quarterly reports. During Title V permit renewal discussions, TDES agreed with BPH that reporting CEM downtimes in the CEMs quarterly reports would be sufficient. Therefore, BPH is no longer reporting all CEM downtimes and out-of-control times in the Title V deviation report. BPH will continue to report CEM excess emission events in the Title V deviation report. In addition, whenever the total downtime and out-of-control time for an individual CEM exceeds 5% of any source operating time, this will be reported as a deviation in the Title V deviation report as well as included in the respective CEMs quarterly report. During 3Q 2022, the FCC Regen NOx and FCC Regen SO_2 CEMs Downtime was greater than 5% of the operating time.

September 20, 2022 – BPH Fire

On September 20, 2022, BPH experienced a fire near the Crude Vac 1 (CV1) unit and TIU mix drum, causing a refinery-wide shutdown. This fire impacted the quality of some fuel going to the fuel gas system, and it resulted in damage to a portion of the hydrocarbon flare system, which includes a flare gas recovery compressor system. As result, BPH’s flare gas recovery system is offline. BPH continuously flared during the shutdown and deinventoring process starting on September 20, 2022, and continuing through the end of the quarter. These excess emissions are included in this report

As a result of the fire, BPH initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, BPH began a longer shutdown process to deinventory, purge and park units until such time as the Refinery is restarted.

As part of this shutdown, there were excess emissions from the Sulfur Recovery Units (SRUs). BPH is reporting these excess emission hours in the SRU summary tables under

the startup/shutdown lines. This is not a violation of 40 CFR 60 Subpart Ja, pursuant to 40 CFR 60.8(c), which states that emissions during startup, shutdown, and malfunction shall not be considered a violation of the applicable emissions limit unless otherwise specified in the applicable standard.

Due to nitrogen and steam purges for equipment and units that have already been deinventoried and cleaned, the hydrocarbon flare system will continuously flare with the potential for excess emissions until flare gas recovery can be safely restarted as stated in the malfunction notification submitted to Ohio EPA / TDES on October 7, 2022.

After making reasonable inquiry the Refinery is submitting this deviation report in good faith. This report is grounded in information currently available to the Refinery. The fire and events related to the fire are under investigation. Thus, the Refinery reserves the right to amend, modify, supplement and/or correct information contained within this report at a later date should it deem necessary.

This report and cover letter were prepared in accordance with a system designed to assure that qualified personnel evaluated all reasonably available information relevant to compliance with the terms and conditions of the Title V Permit over the period covered by the report and that they then reported to me their conclusions with respect to compliance. Based on information and belief formed after reasonable inquiry, the statements and information in this document are true, accurate, and complete. However, the certification of this report and cover letter should not be interpreted to imply that I have personally reviewed all documents, data, or other information underlying the compliance determination. Nor should it be read to imply that the persons responsible for gathering and evaluating the information relied on in preparing this report and cover letter have reviewed all information generated by operations at the facility. As with any regulatory program, it is possible that there were deviations from permit conditions which may not be identified in the normal course of a good faith effort to implement the required compliance efforts under these programs.

In addition, the certification of this report and cover letter should not be construed as containing any admissions that the reported deviations or other events are violations of any applicable requirement. In some cases, applicable rules contain various defences and/or exemptions which may excuse particular deviations. In other cases, the question of whether a particular event constituted a deviation or violation may be subject to interpretational disputes. In still other cases, events may be reported as deviations out of an abundance of caution despite the fact there is insufficient information to determine whether the deviation actually occurred.

If you have any questions concerning this report, please contact Ashley Zapp (ashley.zapp@bp.com or 567-698-4410).

Sincerely,

DocuSigned by:
Des Gillen
90F20640AD13450...

Des Gillen
President - BP-Husky Refining LLC

Ohio Environmental Protection Agency
Deviation Reporting Form

FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 07/01/2022	To: 09/30/2022	From: 07/01/2022	To: 09/30/2022
Total pages in report, including this one (signature page and sections I, II, and III)		26	
Please list any supporting attachments		N/A	
Reporting deadline		10/31/2022	

NOTE: The deviation reporting period shall be stated in the following format: "xx/xx/xx through zz/zz/zz" where xx/xx/xx and zz/zz/zz are the beginning and end dates for the deviation reporting period respectively.

SIGNATURE FOR STATEMENT
This statement shall be signed by the responsible official as defined in OAC rule 3745-77-01(GG). Making of any false material statement, representation or certification constitutes a violation of ORC 3704.05(H), and subjects the responsible party signing this statement to civil and/or criminal penalties as provided in ORC 3704.06(C) and ORC 3704.

CERTIFICATION
Based on information and belief formed after reasonable inquiry, I hereby affirm, as stated in OAC rule 3745-77-03(D), that the statements and information as transmitted in this Title V report are true, accurate and complete to the best of my knowledge.

Authorized Signature DocuSigned by: Des Gillen 90F20640AD13450... Date October 31, 2022

Name (Please Print) Des Gillen Title President, BP-Husky Refining LLC

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
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QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 07/01/2022	To: 09/30/2022	From: 07/01/2022	To: 09/30/2022
Reporting Deadline		10/31/2022	

(Part B) - Facility-wide Permit Requirement Reporting

Insignificant Emissions Unit Negative Declarations (Table 1)

List each insignificant emissions unit where no deviations of any PTI terms or applicable requirements for the listed emissions unit occurred, or add rows as necessary to the deviation reporting table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information)

THERE WERE NO DEVIATIONS OF ANY PTI TERMS OR APPLICABLE REQUIREMENTS FOR THE FOLLOWING LISTED INSIGNIFICANT EMISSIONS UNITS IDENTIFIED IN (PART B.28) OF THE TITLE V PERMIT:
F002, G001, J008, J009, J011, L001, P030, P034, P038, P046, P047, P052, P061, P062, P064, P065, P066, P067, P068, P802, T042, T043, T048, T095, T112, T117, T121, T135, T141, T145, T148, T149, T151, T159, T163, T168, T169, T172, T173, T191, T196, T197, TMP196253

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
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Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 07/01/2022	To: 09/30/2022	From: 07/01/2022	To: 09/30/2022
Reporting Deadline		10/31/2022	

(PART A) - General Terms and Conditions (Permit Requirement Reporting) (Table 1)

Mark the following box with an 'X' if no General Terms and Conditions deviations occurred

X	**THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART A OF THE TITLE V PERMIT DURING THE REPORTING PERIOD**

Add rows as necessary to the following table for reported deviations (one for each General Term as applicable; see detailed instructions for more information) (Table 2)

TITLE V PERMIT TERM NO. Description	Reporting Requirement (Choose one)		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN
				DEVIATION DURATION		DESCRIPTION AND MAGNITUDE OF THE DEVIATION		
	Quarterly	Semi-Annual		DATE / TIME START	DATE / TIME END			

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include	
From: 07/01/2022	To: 09/30/2022	From: 07/01/2022	To: 09/30/2022
Reporting Deadline		10/31/2022	

Facility-wide Permit Requirements Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (mark with an 'X' if applicable) **(Table 2)**

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART B OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Part B - Facility-wide and/or IEU permit requirement (Permit Requirement Reporting) - Deviation Reporting (Table 3)

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

TITLE V PERMIT or IEU PERMIT TERM NO./Description or PTI terms for IEUs	Quarterly	Semi-Annual	ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION INFORMATION: DEVIATION DURATION: DATE / TIME START	DEVIATION INFORMATION: DEVIATION DURATION: DATE / TIME END	DEVIATION INFORMATION: DESCRIPTION AND MAGNITUDE OF THE DEVIATION	PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION ? (Yes or No - If Yes, continue to the next column)	MALFUNCTION VERBAL REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)	MALFUNCTION WRITTEN REPORT(S) DATE(S) (If no reports were made, state "NO REPORTS" in the space below)
Part B.7 - ...the permittee shall at all times comply with the effective rules and compliance dates as established by approved extensions, litigation, EPA clarifications, or rule changes as published even if the requirements reflected in the language of this permit are different. [Also reported in Part C - tbl 2]	X	X	Various	Various	Various	The specific deviations to the requirements effective after Feb 1, 2017 that have deviations are listed in Part C - tbl 2 of this deviation report and have been marked "RSR Deviations" for clarification. The details of these deviations for 3Q2022 are included in that table and only generally referenced here so as to not have duplicative information. *(Revisions to 40 CFR 63 Subparts CC and UUU (Refinery MACT I and II) were promulgated on December 1, 2015 as part of EPA's Petroleum Refinery Sector Risk and Technology Review Rule (RSR) and further revisions and clarifications were promulgated on July 13, 2016. The BP-Husky Title V permit includes the Refinery Rule (RSR) MACT requirements that apply to the refinery and that are effective through February 1, 2017. However, the requirements of the RSR that have compliance dates after February 1, 2017 (and thus are not yet effective) are only generally referenced at the Subpart level in this section of the permit.)*			Yes	9/20/2022	10/7/2022

Other than the deviations listed above (or elsewhere in this report) there were no other deviations of Part II requirements of the Title V permit and other PTIs incorporated in the Title V permit.

Ohio Environmental Protection Agency
Deviation Reporting

FACILITY NAME		BP-Husky Refining LLC	
FACILITY ID (PREMISE NUMBER)		04-48-02-0007	
FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 07/01/2022	To: 09/30/2022	From: 07/01/2022	To: 09/30/2022
Reporting Deadline		10/31/2022	

PART C - Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Negative Declarations (Table 1)

List each emissions unit where no deviations of any terms for the listed emissions unit occurred, or add rows as necessary to the second table (see next page) for reported deviations (one for each term as applicable; see detailed instructions for more information)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:

Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
B015	Part C-tbl 2 - visible emissions and fuel burned deviation	X
B019	Part C-tbl 2 - fuel burned deviation	X
B029	Part C-tbl 2 - visible emissions and fuel burned deviation	X
B031	Part C-tbl 2 - visible emissions and fuel burned deviation	X
B032	Part C-tbl 2 - fuel burned deviation	X
B036	X	X
F001	X	X
F005	X	X
F006	X	X
J004	X	X
J005	X	X
P007	Part C-tbl 2 -365-day NOx and opacity deviation	Part C-tbl 2 - Table 41, quarterly monitor inspection, CEM downtime, and nickel sampling deviation
P009	Part C-tbl 2 - SO_2 concentration deviation	X
P010	Part C-tbl 2 - flare/ control deviations	X
P011	Part C-tbl 2 - flare/ control deviations	X
P014	X	X
P017 (see Note 2 below)	Part C-tbl 2 - flare/ control deviations	X
P025 (see Note 2 below)	Part C-tbl 2 - CD Audit and benzene stripper vent deviation	Part C-tbl 2 - CD deviation
P036 (see Note 2 below)	Part C-tbl 2 - flare/ control deviations	X

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:		
Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
P037	Part C-tbl 2 - TOX temp, SO_2 concentration, and TRP flare pilot outage deviations	X
P048	X	X
P053	X	X
P054	X	X
P803	Part C-tbl 2 - NSPS NNN deviation	X
T047	X	X
T073	X	X
T102	X	X
T120	X	X
T139	X	X
T164 (see Note 2 below)	Part C-tbl 2 - flare/ control deviations	X
T170 (see Note 2 below)	Part C-tbl 2 - flare/ control deviations	X
T177	X	X
Group B1: B008, B009, B010	Part C-tbl 2 - H_2S deviation	X
Group B2: B017, B022	Part C-tbl 2 - visible emissions deviation and fuel burned deviation (B022 only)	X
Group B3: B030, B033	Part C-tbl 2 - SO_2 daily limit (B033 only) and fuel burned (B030 only) deviation	X
Group B4: B034, B035	Part C-tbl 2 - visible emissions (B034 only) and fuel burned (B034 only) deviation	X
Group P1: P021, P022, P023 (see Note 2 below)	Part C-tbl 2 - flare/ control deviations	X
Group P2: P028, P029 (see Note 2 below)	Part C-tbl 2 - flare/ control deviations	X
Group P3: P041, P043 (see Note 2 below)	Part C-tbl 2 - flare/ control deviations	X
Group P4: P003, P004	Part C-tbl 2 - visible emissions, H_2S concentration, NHVcz deviation(s)	Part C-tbl 2 - Table 13 Deviations, quarterly monitoring inspection and image of flame record deviations
Group P5: P055, P056, P057, P058	X	X
Group P6: P059, P060, P063	X	X
Group P7: P044, P045	X	X
Group T1: T078, T080, T081, T082, T086, T087, T088, T092,	X	X
Group T2: T113, T114, T115, T116	X	X
Group T3: T089, T153, T154, T155, T156, T157, T161	X	X
Group T4: T010, T011, T012, T013, T014, T051	X	X
Group T5: T045, T046	X	X
Group T6: T019, T084, T174, T187, T188	X	X

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF PART III (Section C) OF THE TITLE V PERMIT FOR THE FOLLOWING LISTED EMISSIONS UNITS:		
Emission Unit ID	Please place an 'X' below if there were no Quarterly Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below	If applicable, please place an 'X' below if there were no Semiannual Deviations - If an 'X' is not indicated, the deviation(s) must be identified in Table 2 below
Group T7: T016, T017, T019, T020, T021, T024, T025, T026, T027, T028, T029, T030, T031, T032, T033, T034, T035, T036, T037, T038, T039, T040, T041, T044, T059, T060, T085, T090, T091, T096, T097	X	X
Group T8: T166, T167	X	X
Group T9: T136, T137, T138	X	X

Notes:

1 - This unit has a vent which is routed to a flare and could potentially experience a deviation.

2 - This unit has a vent which is routed to a flare that experienced a deviation. If the vent was active at that time, it may constitute a deviation for this emission unit.

Ohio Environmental Protection Agency
Deviation Reporting

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FACILITY ADDRESS		4001 Cedar Point Road, Oregon, OH 43616	
Issuance or most recent modification date		P0128721 - Minor Permit Mod effective 11/18/2021 (expires 8/3/2022)	
QUARTERLY Reporting Period		**SEMIANNUAL** Reporting Period (please indicate "N/A" below in the "From" and "To" fields if this report does not include semiannual deviation reporting)	
From: 07/01/2022	To: 09/30/2022	From: 07/01/2022	To: 09/30/2022
Reporting Deadline		10/31/2022	

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION		DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
					Date / Time Start	Date / Time End						
P025 - Refinery WWT System	**Citation: P025: Part C.18.b)(1)i, b)(2)j.i: [40 CFR 60.690(a)(1)]** The provisions of Subpart QQQ apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction commenced after May 4, 1987. **Part C.18.c)(3)(c), d)(5)(c): [§60.692-2(a)]** -Each drain subject to 40 CFR 60.692-2 shall equipped with water seal controls. If a drain is in active service, water seal controls shall be checked by visual or physical inspection monthly.	X	X	Program Audit	4/22/2020	9/30/2022	Two areas drains, twelve hub drains, and three catch basins in the Hydrogen Unit area were not controlled with water seals and have not been monitored pursuant to NSPS QQQ requirements. (previously reported)	An NSPS QQQ audit was conducted in late 2019 per the Consent Decree at the Refinery . This audit found that the Refinery inadvertently missed including two area drains, twelve hub drains, and three catch basins in the Hydrogen area in the refinery NSPS QQQ Management Program when junction boxes (manholes) were modified for the Flare Gas and Recovery Treating Project.	A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for this equipment was to be reviewed and verified prior to becoming a final deviation. The verification for these drains was completed on December 31, 2020. The upgrades are scheduled to be completed by December 31, 2022.	No	No Report	No Report
P025 - Refinery WWT System	**Citation: P025: Part C.18.b)(1)i, b)(2)j.i: [40 CFR 60.690(a)(1)]** The provisions of Subpart QQQ apply to affected facilities located in petroleum refineries for which construction, modification, or reconstruction commenced after May 4, 1987. **Part C.18.c)(3)(c), d)(5)(c): [§60.692-2(a)]** -Each drain subject to 40 CFR 60.692-2 shall equipped with water seal controls. If a drain is in active service, water seal controls shall be checked by visual or physical inspection monthly.	X	X	Program Audit	4/22/2020	9/30/2022	Fourteen drain hubs, four clean-outs, ten catch basins, and five manholes that were part of the 1993 Benzene Stripper project were not designed to meet the requirements of NSPS QQQ - have not been monitored. (previously reported)	An NSPS QQQ audit was conducted in late 2019 per the Consent Decree at the Refinery . This audit found that the 2015 Applicability Assessment report that had previously identified the 1993 Benzene Stripper project as not triggering the requirements of NSPS QQQ was incorrect. The 14 drain hubs, 4 clean-outs, 10 catch basins and 5 manholes installed as part of the Benzene Stripper project are subject to the requirements of NSPS QQQ.	A compliance plan was developed for the findings from the QQQ Audit and was submitted to TDES on July 21, 2020. Per this plan, the audit finding for this equipment was to be reviewed and verified prior to becoming a final deviation. The verification for these drains was completed on January 15, 2021. Fourteen drain hubs, four clean-outs, two catch basins, and five manholes have been added to the program. Eight catch basins require upgrades to meet QQQ design criteria. The upgrades are scheduled to be completed by December 31, 2022.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P037 - SRU2/3	**Citation: P037 Part C.20.b)(1)(I) [40 CFR 63 Subpart UUU: 63.1568(a)(4)(iii)]** You must comply with one of the three options in 40 CFR 63.1568(a)(4) during periods of startup and shutdown: (iii) Send any startup or shutdown purge gases to a thermal oxidizer or incinerator operated at a minimum hourly average temperature of 1,200 degrees Fahrenheit in the firebox and a minimum hourly average outlet oxygen concentration of 2 volume percent (dry basis) *(**NOTE:** 40 CFR Part 60 exempts startup and shutdown exceedances; however 40 CFR Part 63 does not. RSR added this startup/shutdown allowance for 40 CFR Part 63. The specific language above is not in the Title V, but condition C.13.b)(1)j references compliance with all of 40 CFR 63 Subpart UUU.)*	X		Continuous Monitoring System (CEMS)	7/28/2022 at 16:00 hours	7/28/2022 at 17:00 hours	There was one hour during the startup of SRU2 where the TRP Thermal Oxidizer temperature was not maintained at or above 1200 F; however, the O_2 concentration was maintained in compliance during this time.	During the planned start up of the SRU2 after the facility turnaround, the air ratio in the TRP Thermal Oxidizer was not maintained and briefly caused the temperature in the TRP Thermal Oxidizer to dip below 1200 F.	Operations adjusted the air to natural gas ratio to increase the temperature in the stack and the ratio was maintained for the remainder of the startup.	No	No Report	No Report
P037 - SRU2/3	**Citation: P037 Part C.20.b)(2)h., d)(11)b, f)(1)i. [40 CFR 60.104(a)(2)(i) and 40 CFR 63.1568(a)(1)(i) [per CD - subject to NSPS Ja - citation 40 CFR 60.102a(f)(1)(i)]** The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant with an oxidation control system or a reduction control system followed by incineration, in excess of 250 ppm SO2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average. ***NOTE:** this is a Title V Deviation only. This is not a Deviation of 40 CFR 60 Subpart Ja, pursuant to 40 CFR 60.8(c), which states that emissions during startup, shutdown, and malfunction shall not be considered a violation of the applicable emissions limit unless otherwise specified in the applicable standard.*	X		Continuous Monitoring System (CMS)	7/20/2022 at 00:00 hours 7/27/2022 at 15:00 hours	7/20/2022 at 9:00 hours 7/29/2022 at 2:00 hours	The SO_2 concentration from the TRP Thermal Oxidizer exceeded 250 ppmv SO_2 for a total of forty four (44) 12-hr average periods.	During the planned start up of the SRU2 after the facility turnaround, startup procedures require diverting around TGTU for personal and process safety reasons. While diverting the TGTU, SO_2 concentration in the TRP Thermal Oxidizer stack exceeded the 250 ppmv SO_2 12-hr rolling average. All startup procedures were being followed at this time.	The SRU startup procedures were followed during this startup. The procedure development included evaluating ways to minimize emissions during the startup process. During the startup of the SRU the Refinery has made every attempt to develop procedures that minimize excess emissions consistent with safety and good air pollution control practices.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P037 - SRU2/3	**Citation: P037 Part C.20.b)(2)h., d)(11)b, f)(1)i. [40 CFR 60.104(a)(2)(i) and 40 CFR 63.1568(a)(1)(i) [per CD - subject to NSPS Ja - citation 40 CFR 60.102a(f)(1)(i)]** The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant with an oxidation control system or a reduction control system followed by incineration, in excess of 250 ppm SO2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average.	X		Continuous Monitoring System (CMS)	8/17/2022 at 14:00 hours 8/21/2022 at 17:00 hours 8/23/2022 at 16:00 hours 8/26/2022 at 17:00 hours	8/18/2022 at 00:00 hours 8/22/2022 at 05:00 hours 8/24/2022 at 04:00 hours 8/27/2022 at 05:00 hours	The SO_2 concentration at the TRP Thermal Oxidizer exceeded the required 250 ppmv on a 12-hour rolling average for a total of forty-six (46) 12-hr average periods over the entire event.	After the refinery turnaround, operations was attempting to pull acid gas being diverted to Chemtrade back to the Refinery to be processed in SRU2 and SRU3. The concentration of SO_2 in the Tail Gas Unit increased unexpectedly and SO_2 at the TRP Thermal Oxidizer exceeded the limit. After four separate attempts to pull acid gas back to the process unit, an investigation determined the sudden increases in SO_2 were caused by pluggage in one of the sulfur dip legs coming off of the final sulfur condenser. This pluggage caused corrosion in a process analyzer and it failed. Without the use of this process analyzer, the lead board operator was not able to accurately manage the air to natural gas flow during the startup of the unit, which caused the exceedances.	During each event, operations troubleshot the event to bring the SO_2 concentration down and to limit the impact of each event. Multiple attempts were made to unplug the sulfur dip leg and it was finally removed with nitrogen on 9/2/2022. The corroded process analyzer was repaired on 9/1/2022. An investigation into preventing future pluggage in the dip leg is currently ongoing. Once completed, any recommendations will be implemented by the Refinery.	No	No Report	No Report
P009 - SRU1	**Citation: P009 Part C.13.b)(1)f., b)(2)g, f)(1)b. [40 CFR 60.104(a)(2)(i) and 40 CFR 63.1568(a)(1)(i), and per CD - subject to NSPS Ja - citation 40 CFR 60.102a(f)(1)(i)]** The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant containing in excess of 250 ppm SO2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average. **Note:** *this is a Title V Deviation only. This is not a deviation of 40 CFR 60 Subpart J standard pursuant to 40 CFR 60.8(c), which states: emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.*	X		Continuous Monitoring System (CMS)	7/27/2022 at 5:00 hours 7/30/2022 at 21:00 hours	7/28/2022 at 17:00 hours 7/31/2022 at 20:00 hours	The SO_2 concentration at the SRU1 Thermal Oxidizer exceeded the required 250 ppmv SO_2 for over a 12-hour period for a total exceedance of fifty-nine (59) 12-hr average periods over the startup event.	During the planned start up of the SRU1 after the facility turnaround, startup procedures require diverting around TGTU for personal and process safety reasons. While diverting the TGTU, SO_2 concentration in the SRU1 Thermal Oxidizer stack exceeded the 250 ppmv SO_2 12-hr rolling average. All startup procedures were being followed at this time to try to minimize the duration of these events.	The SRU1 startup procedures were followed during this startup. The procedure development included evaluating ways to minimize emissions during the startup process. During the startup of the SRP the Refinery has made every attempt to develop procedures that minimize excess emissions consistent with safety and good air pollution control practices.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

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EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P003 - East Hydrocarbon Flare	**Citation: P003: Part C.40.b)(1)c [40 CFR 63 Subpart CC)]** *[Note: there is not a specific Title V reference to the following requirement]* ***[40 CFR 63.671(a)(1)]*** *(a)(1) Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in table 13 of this subpart. Table 13 reqts - Conduct a flow sensor calibration check at least biennially (every two years); [AIso reported in Part B-tbl 3 - RSR Deviation]*		X	Continuous Monitoring System	5/31/2022	10/5/2022	The flow meter on the East flare measuring hydrogen did not complete its biennial calibration as required by May 31, 2022.	The flow meter on the Linde Hydrogen vent to the East flare is a Coriolis flowmeter. This was the first required calibration since this meter was installed and the manufacturer recently reported that the transmitter cannot run the required smart meter verification under flowing conditions. Therefore, the line must be out of service to complete the calibration. Since this line is not normally in service, it was not previously identified to be an issue. During the TIU TAR, the line was being utilized on a continuous basis to mitigate fuel gas imbalances during the turnaround. It could not be taken out of service without creating a risk for unstable operations.	The Refinery completed the calibration at the beginning of the 4th quarter of 2022 once this line was out of service and the calibration could be completed. The flow meter is now in compliance. The Refinery will plan in advance for future calibrations to complete during periods when the line will be out of service.	No	No Report	No Report
P003 - East Hydrocarbon Flare	**Citation: P003: Part C.40.b)(1)c [40 CFR 63 Subpart CC (63.644(a)(2))]** *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63.644(a)(2)]** Where a flare is used on and after January 30, 2019, the requirements of §63.670 shall be met. **[40 CFR 63.670(e)]** For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[AIso reported in Part B-tbl 3 - RSR Deviation]*	X		Continuous Monitoring System	7/07/2022 at 12:00 hours	7/07/2022 at 12:15 hours	The combustion zone net heating value of the flare was measured less than the required 270 BTU/SCF for one (1) 15-minute quadrant during a flaring event.	The net heating value (NHVcz) on the East Flare dropped below 270 btu/scf for one (1) 15 minute quadrant when the Refinery's 3rd party acid gas receiver, Chemtrade A Plant, tripped due to issues with their burner management system (BMS). This trip led to upsets in the refinery process units that were not in turnaround at the time and unexpected flaring occurred. The variability in the composition of the gas being flared was such that operations could not respond quickly enough to avoid the NHV exceedance.	Operations adjusted the steam and natural gas purge to increase the NHV above the limit.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P004 - West Hydrocarbon Flare	**Citation: P004: Part C.40.d)(2)** The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC: *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63 Subpart CC; 40 CFR 63.671(a)]** For each CPMS installed to comply with applicable provisions in §63.670, the owner or operator shall install, operate, calibrate, and maintain the CPMS as specified in paragraphs (a)(1) through (8) of this section. (1) Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in Table 13 of this subpart. *[Also reported in Part B-tbl 3 - RSR Deviation]*		X	Continuous Parameter Monitoring System (CPMSs)	7/13/2022	9/29/2022	Flare instrumentation did not meet MACT Table 13 accuracy requirements	West Flare Ring steam flow instrument FI-2203 was replaced in kind during the TIU TAR. The new instrument was incorrectly set up to utilize a standard density rather than correcting the reading to actual process conditions. Additionally, the instrument was not set up with the correct low flow cut-off point. The minimum should have been between 5000-6000 lbs/hr, but it was set at 16,000 lbs/hr.	The instrument engineer began troubleshooting the flowmeter with a manufacturer's service technician. When the error was discovered, the instrument was corrected on 9/29/2022 and remained in compliance the rest of the quarter.	No	No Report	No Report
P003 - East Hydrocarbon Flare	**Citation: P003 Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	X		Continuous Monitoring System	7/07/2022 at 19:00 hours	7/08/2022 at 06:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of eleven (11) 3-hour averages	During the TIU TAR, the butane sphere compressor system which normally discharges to the FCC, was aligned to the East flare while the FCC was down. While operating in this configuration, the butane spheres received a delivery of isobutane and when the displaced gas routed to the flare, it picked up residual H_2S in the flare header and caused an exceedance of the 162 ppm 3-hour average limit.	When the incident occurred, the butane sphere compressor system was shutdown and the delivery was stopped. Future shipments for the remainder of TAR were limited. There is an investigation into the cause of the high H_2S during this configuration currently underway and the refinery will implement any corrective actions recommended when the investigation is complete. Following startup of the FCC the butane system was rerouted back to the FCC and out of the hydrocarbon flare system.	No	No Report	No Report
P004 - West Hydrocarbon Flare	**Citation: P003/P004, Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	X		Continuous Monitoring System	8/01/2022 at 14:00 hours 8/03/2022 at 13:00 hours 8/04/2022 at 05:00 hours	8/01/2022 at 23:00 hours 8/03/2022 at 19:00 hours 8/04/2022 at 09:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of nineteen (19) 3-hour averages over three days during the start-up after the Refinery turnaround	When starting up after the Refinery turnaround, the Naphtha Hydrotreater Feed drum pressure controller PV-7505B was inadvertently left aligned to the flare. Whenever this pressure controller opened up, the extra gas from the feed drum took up a large amount of flare gas recovery compressor capacity, and normal operational production variations or upsets were not able to be recovered to the fuel gas system. This caused higher H_2S fuel gas to be flared.	Once it was discovered, the Naphtha Hydrotreater feed drum pressure controller valve was realigned to the Coker Wet Gas Compressor on 8/4/2022. This freed up capacity in the flare gas recovery system which allowed the gas to be recovered and treated in the amine system instead of being flared. An investigation is currently in progress to determine why the controller was left aligned to the flare and recommendations will be implemented by the refinery.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P003/P004 - East and West Hydrocarbon Flare	**Citation: P003/P004, Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	X		Continuous Monitoring System	8/04/2022 at 19:00 hours	8/05/2022 at 08:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of thirteen (13) 3-hour averages	A manual 10" bypass valve around the desalters was inadvertently left open following the completion of the Refinery TAR event. This allowed raw crude to bypass both desalters. This bypass caused elevated water content in the crude being heated in the Crude 1 furnace and these fluctuations in crude composition translated into fuel gas pressure fluctuations that ultimately led to the Crude 1 furnace shutdown. The unexpected shutdown of the Crude 1 furnace and cut in crude rates led to a domino effect in downstream process units. This caused the flare gas recovery compressors to trip offline due to high pressure, which led to high H_2S gas to be sent directly to the flares.	Crude rates were cut, and Operations began troubleshooting the furnace. The flare gas recovery compressors were re-started as quickly as possible. Once restarted, they remained in-service for the remainder of the Crude 1 furnace incident. The investigation into the Crude 1 furnace shutdown discovered a manual 10" bypass valve that had inadvertently been left open, which was closed upon discovery. Access to the 10" valve will be limited until the valve is removed at the next available planned outage.	No	No Report	No Report
P004 - West Hydrocarbon Flare	**Citation: P003/P004, Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	X		Continuous Monitoring System	8/06/2022 at 06:00 hours	8/06/2022 at 12:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of six (6) 3-hour averages	During the Crude 1 furnace and Crude 1 tower upset caused by the bypass valve to the Crude desalter being left open, the Alky 3 unit underwent an emergency shutdown due to an acid carryover event. These simultaneous events caused additional load on the flare gas recovery system, which caused high H_2S gas to be flared instead of recovered by the compressors.	The top pump around on the Crude tower was re-established, and the overhead gas was directed out of the flare gas recovery system and back to the FCC Overhead Drum. This allowed the load to the flare gas recovery compressors to lessen so that all of the gas could be treated and recovered prior to being sent to the flare.	No	No Report	No Report
P003/P004 - East and West Hydrocarbon Flare	**Citation: P003/P004, Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	X		Continuous Monitoring System	8/19/2022 at 03:00 hours	8/19/2022 at 12:00 hours	H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for a total of nine (9) 3-hour averages	An upset in the Sat Gas Plant caused the Debutanizer PSV to lift to the flare and also required venting ethane from the Depropanizer tower to the flare. This additional process gas was not able to be recovered by the flare gas recovery system, which led to high H_2S material to be flared.	Operators quickly responded to the report of a PSV lifting and determined the Debutanizer tower had lifted. The tower operation was adjusted and the relief valve re-seated. Operations worked to stabilize the Sat Gas Plant and all venting was stopped. An investigation is currently in progress and the refinery will implement any recommendations when the investigation is concluded.	No	No Report	No Report

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THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

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		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P003 - East Hydrocarbon Flare	**Citation: P003: Part C.40.b)(1)c [40 CFR 63 Subpart CC (63.644(a)(2))]** *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63.644(a)(2)]** Where a flare is used on and after January 30, 2019, the requirements of §63.670 shall be met. **[40 CFR 63.670(e)]** For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[Also reported in Part B-tbl 3 - RSR Deviation]*	X		Continuous Monitoring System	7/20/2022 at 15:30 hours 7/20/2022 at 18:30 hours 7/21/2022 at 06:45 hours 7/27/2022 at 03:15 hours 7/27/2022 at 05:30 hours 7/27/2022 at 07:15 hours 7/30/2022 at 06:30 hours	7/20/2022 at 16:00 hours 7/20/2022 at 18:45 hours 7/21/2022 at 07:00 hours 7/27/2022 at 03:30 hours 7/27/2022 at 05:45 hours 7/27/2022 at 07:30 hours 7/30/2022 at 06:45 hours	The combustion zone net heating value of the flare was measured less than the required 270 BTU/SCF for eight (8) 15-minute quadrants during this flaring event.	During the unit startup process from the refinery wide turnaround, the NHVcz on the East Flare dropped below 270 BTU/SCF intermittently over ten days. There was inconsistent hydrocarbon being let down to the flare system during the start-up of multiple process units, as well as nitrogen. These factors caused the NHVcz to dip below the required operating limit.	Operations adjusted the steam and natural gas purge to increase the NHV above the limit.	No	No Report	No Report
P003 - East Hydrocarbon Flare	**Citation: P003: Part C.40.b)(1)c [40 CFR 63 Subpart CC (63.644(a)(2))]** *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63.644(a)(2)]** Where a flare is used on and after January 30, 2019, the requirements of §63.670 shall be met. **[40 CFR 63.670(e)]** For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[Also reported in Part B-tbl 3 - RSR Deviation]*	X		Continuous Monitoring System	8/03/2022 at 15:45 hours 8/04/2022 at 21:30 hours	8/03/2022 at 16:00 hours 8/04/2022 at 22:15 hours	The combustion zone net heating value of the flare was measured less than the required 270 BTU/SCF for a total of four (4) 15-minute quadrants during flaring events	When starting up after the refinery wide turnaround, the Naphtha Hydrotreater Feed drum pressure controller PV-7505B was inadvertently left aligned to the flare. Whenever this pressure controller opened up, the extra gas caused variations in the composition of the flare gas being flared at the time, which caused the NHVcz to drop below its required limit, and operations could not respond quickly enough to prevent the exceedance.	Operations adjusted the steam and natural gas purge to increase the NHV above the limit. Once it was discovered, the Naphtha Hydrotreater feed drum pressure controller valve was realigned to the Coker Wet Gas Compressor on 8/4/2022. This freed up capacity in the flare gas recovery system which allowed the gas to be recovered and treated in the amine system instead of being flared. An investigation into the cause of the pressure controller valve being left aligned to the flare after the TAR is currently in progress and recommendations will be implemented by the refinery.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

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		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P003/ P004 - East and West Hydrocarbon Flare	**Citation: P003/P004: Part C.40.d)(2)** The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC: *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63 Subpart CC; 40 CFR 63.671(a)]** For each CPMS installed to comply with applicable provisions in §63.670, the owner or operator shall install, operate, calibrate, and maintain the CPMS as specified in paragraphs (a)(1) through (8) of this section. (1) Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in Table 13 of this subpart. *[Also reported in Part B-tbl 3 - RSR Deviation]*		X	Continuous Parameter Monitoring System (CPMSs)	1/31/2020	9/30/2022	the Refinery has identified monitoring Instrumentation in the hydrocarbon flare system that does not meet all of the requirement of 40 CFR 63.671 of Subpart CC. (previously reported)	The refinery sector rule updated 40 CFR 63 Subpart CC requirements in 2015 to include new flare instrumentation requirements. the Refinery immediately began implementing their plan to come in to compliance and as they have operated, additional flare instrumentation has been identified that does not meet the MACT CC - Table 13 requirements.	This deviation was first identified in 1Q2020 for two flare gas flow meters. A capital project to bring the waste gas system flow meter into compliance was completed by the end of 2Q2022. A second capital project is in progress to update six natural gas system flow meters and one hydrogen gas flow meter into compliance. Three of the six natural gas flow meters were completed on October 24, 2022. The remaining upgrades are in progress and scheduled to be completed by December 31, 2022.	No	No Report	No Report
P003/ P004 - East and West Hydrocarbon Flare	**Citation: P003/P004 Part C.40.b)(1)c [40 CFR 63 Subpart CC, 63.671(a)(1)]** Except for CPMS installed for pilot flame monitoring, all monitoring equipment must meet the applicable minimum accuracy, calibration and quality control requirements specified in table 13 of this subpart NOTE: Table 13 requires at least quarterly, inspect all components for integrity and all electrical connections for continuity, oxidation, and galvanic corrosion, unless the CPMS has a redundant temperature sensor. *[Also reported in Part B-tbl 3 - RSR Deviation]*		X	Continuous emissions monitoring	7/1/2022	9/30/2022	The quarterly inspection of multiple continuous parameter monitors required for compliance with 40 CFR Subpart CC were not performed during the third quarter of 2022.	The third quarter inspections of the waste gas, steam and natural gas flow meters, as well as the temp and pressure indicators used to correct the readings were missed due to issues with the refinery's work order system, which failed to autogenerate work order's to perform inspections of these instruments.	These missed inspections were discovered at the beginning of the fourth quarter when they were re-entered in the work order system and the inspection notification was initiated. The fourth quarter inspections were completed as soon as possible.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P003/ P004 - East and West Hydrocarbon Flare	**Citation: P003/P004: Part C.40.d)(2)** The permittee shall comply with the applicable monitoring and record keeping requirements required in 40 CFR 63, Subpart CC: *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63 Subpart CC; 40 CFR 63.670(h)(2)]** (h) Subsequent to initial observations, conduct visible emissions observations using either the methods in paragraph (h)(1) or (h)(2) of this section. (h)(2) Use a video surveillance camera to continuously record (at least one frame every 15 seconds with time and date stamps) images of the flare flame and a reasonable distance above the flare flame at an angle suitable for visual emissions observations. The owner or operator must provide real-time video surveillance camera output to the control room or other continuously manned location where the camera images may be viewed at any time. [Also reported in Part B-tbl 3]		X	Continuous video surveillance for visible emissions from flare	9/3/2022	9/15/2022	The images of the flare flame were not continuous recorded as required	The Honeywell Snapshot Manager Application Service malfunctioned due to a server issue and stopped collecting the data	The server issue was resolved on 9/15/22 and the Refinery continues to work with Honeywell to identify and implement solutions to improve long term reliability of the system.	No	No Report	No Report
P007 (FCC/CO Boiler)	**Citation: P007 - Part C.12.c)(3)(b) [40 CFR 63 Subpart UUU, 63.1572(c)(1)]** You must install, operate, and maintain each continuous parameter monitoring system according to the requirements in Table 41 of this subpart. NOTE: Table 41, item 7. "Pressure/Pressure drop sensors" requires quarterly inspection of all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage unless the CPMS has a redundant pressure sensor.		X	Continuous emissions monitoring	4/1/2022	9/30/2022	The quarterly inspection of the FCC regenerator overhead pressure indicator was not performed during the second and third quarter of 2022.	Due to the focus on TIU TAR, which began on April 20, 2022, the second quarterly inspection of the regen overhead pressure (PR303) was not conducted due to the shutdown of the FCC starting the third week of the quarter. The notice to conduct this inspection is sent to the operators later in the quarter and it was inadvertently missed that it should have been conducted prior to the TAR event. The FCC started up in July 2022, but the third quarter inspection was missed due to issues with the refinery's work order system, which resulted in it failing to autogenerate work order's to perform inspections of these instruments.	These missed inspections were discovered at the beginning of the fourth quarter when the work orders were being re-entered into the Refinery's work order system to address issues with the work order system. As soon as the missed inspection was discovered, the 4th quarter inspection was conducted (Oct 6, 2022). No issues were identified. The refinery fix to the work order system is expected to keep the refinery from missing this inspection in the future.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P007 (FCC/CO Boiler)	**Citation: P007 - Part C.12.d)(1) [40 CFR 63 Subpart UUU, 63.1572(a)(1), Table 40 and Perf Spec 1, 40 CFR Part 60, Appendix B] (1)** The permittee shall maintain a written quality assurance/quality control plan for the continuous opacity monitoring system(s), designed to ensure continuous valid and representative readings of opacity and compliance with 40 CFR Part 60, Appendix B, Performance Specification 1. The plan shall include, at a minimum, procedures for conducting and recording daily automatic zero/span checks, provisions for conducting a quarterly audit of the continuous opacity monitoring system(s), and a description of preventive maintenance activities		X	Opacity monitoring system	7/1/2022	9/30/2022	Quarterly audit was not conducted on opacity monitors on FCCU bypass stack and CO Boiler/ESP stack in 3Q	The quarterly audit was scheduled to occur the final week in September, but due to the fire that occurred on 9/20/2022, access to the refinery unit was strictly limited to only essential work required to bring the units into safe out mode, which lasted to the end of the quarter. Due to this incident, the refinery requested an extension to complete the 3rd Quarter Opacity audit on our CO Boiler/ESP Stack and FCCU Bypass Stack COMS.	The refinery requested an extension to complete the 3rd quarter Opacity audit within 30-days of startup of the FCCU. Per verbal discussions with Peter Park and Todd Brown, the agency agreed with the Refinery's proposal and it was communicated that enforcement action would not be taken due to the missed quarterly audit, although it is a deviation until the audit can be conducted.	Yes	9/20/2022	10/7/2022
P007 (FCC/CO Boiler)	**Citation: P007 Part C.12.b)(1), f)(1)a.; [OAC rule 3745-17-07(A)].** Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.	X		Continuous emissions monitoring	7/21/2022 at 23:48 hours (bypass stack) 7/26/2022 at 08:30 hours (bypass stack) 7/24/2022 at 12:06 hours (COB)	7/22/2022 at 00:00 hours (bypass stack) 7/29/2022 at 16:54 hours (bypass stack) 7/24/2022 at 12:12 hours (COB)	The opacity of the FCCU bypass stack exceeded 20% on a 6-minute average for four hundred twenty one (421) 6-minute averages The opacity of the COB/ESP stack exceeded 20% on a 6-minute average for one (1) 6-minute average.	During the planned startup of the FCCU and CO Boiler after the turnaround, the FCCU Regenerator overhead off-gas was routed to the Bypass stack and then the CO Boiler stack prior to turning on the ESP per procedure for safety reasons. Operation without the ESP led to the high opacity readings.	During this planned event, operators made every effort to minimize opacity exceedances during the startup. Startup procedures were followed and mitigation was implemented to the extent possible.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P007 (FCCU / CO Boiler)	**Citation: P007, Part C.12.b)(2)i, f)(1)k. [PTI P0105902 issued 5/18/2011]** The permittee shall comply with a long-term limit of 58.1 ppmvd NOx at 0% O2 on a 365-day rolling average basis as demonstrated by using a CEM certified, calibrated, maintained, and operated in accordance with the applicable requirements of 40 CFR 60.11, 60.13, and Part 60 Appendix F. This long-term limit shall apply at all times when the FCCU is operating, including during periods of startup, shutdown, and malfunction. The limit also shall apply during periods of scheduled maintenance of equipment other than the FCCU. These NOx requirements are due to (PTI P0105902 issued 5/18/2011).	X		Continuous Monitoring System (CMS)	7/30/2022	8/29/2022	The 365-day NOx limit of 58.1 ppmvd NOx at 0% O_2 was exceeded for 31 days	Following the startup of the FCCU and CO Boiler after a refinery wide turnaround event, the butterfly valve separating the two units became stuck and the Refinery was unable to route the FCC Regenerator gas into the CO Boiler. This led to higher emissions due to a limited ability to treat NOx under these operating conditions.	After significant troubleshooting efforts over several days, Operations was finally able to get the valve to open. The Regen gas was re-routed out of the Bypass stack and into the CO Boiler. Once this was done, the NOx-out system was able to be further optimized and other operational changes made to the Boiler to reduce daily NOx emissions below the long term permit limit of 58.1 ppm.	No	No Report	No Report
P007 (FCC/CO Boiler)	**Citation: P007 Part C.12.b)(1)k, b)(2)q, d).(17)d. 40 CFR 63 Subpart UUU; 63.1564(c)(1)** Demonstrate continuous compliance with each emission limitation in Tables 1 and 2 of this subpart that applies to you according to the methods specified in Tables 6 and 7 of this subpart. **Table 7: Option 9.a.i.(1) ...** determining and recording equilibrium catalyst Ni concentration using the procedures in note 2 of Table 7, at least once a week; and determining and recording the hourly average Ni operating value using Equation 12 of § 63.1564.		X	Continuous emissions monitoring	8/15/2022	8/21/2022	Weekly samples of FCCU catalyst were not collected in order to determine Ni limit	The nickel in the catalyst of the FCCU from 8/15/2022 through 8/21/2022 was not sampled and sent to Lab for analysis. There was a new FCC unit process engineer that was unaware of the sampling having a compliance requirement.	The new FCC unit process engineer was notified of the importance of this weekly sample and the next weekly sample taken and sent to the lab for analysis as required. BP is following up to update the handover book to include the importance of this sampling procedure.	No	No Report	No Report
B033 - East BGOT Furnace	**Citation: B033 Part C.35.b)(1)(a), f)(1)h.** Sulfur dioxide (SO2) emissions from B033 shall not exceed 0.88 pound per hour and 3.86 tons per rolling, 12-month period**.**	X		Continuous emissions monitoring	7/22/2022 7/30/2022	7/23/2022 8/01/2022	The SO_2 lb/hr daily average limit of 0.88 lb/hr was exceeded on two separate days during the quarter.	During startup of the refinery after the refinery wide TAR, there were spikes of refinery fuel gas with high sulfur content sent directly into the TIU fuel gas system. This high sulfur gas was from the Coker Wet Gas compressor system, which had not completed its startup after the TAR. The high sulfur fuel gas caused an exceedance in the short-term SO_2 limit from the East BGOT furnace. Upon further investigation, the new anti-surge control system that was installed on the Wet gas compressor during the TAR had an incorrect setting.	The control system on the anti-surge control system on the Coker Wet Gas compressor was modified and the Coker Wet Gas compressor operated normally going forward.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

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		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P007 (FCC/CO Boiler)	**Citation: P007 Part C.12.b)(1)c. and C.12.f)(1)a [OAC rule 3745-17-07(A)]** Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.	X		Opacity monitoring system	9/20/2022 at 18:30 hours (CO Boiler) 9/20/2022 at 18:48 hours (Bypass stack) 9/27/2022 at 13:42 hours (Bypass stack)	9/20/2022 at 21:28 hours (CO Boiler) 9/21/2022 at 09:00 hours (Bypass stack) 9/27/2022 at 14:18 hours (Bypass stack)	The opacity of the FCCU bypass stack exceeded 20% on a 6-minute average for ninety (90) 6-minute averages The opacity of the COB/ESP stack exceeded 20% on a 6-minute average for thirty one (31) 6-minute average.	A Refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum caused the refinery to initiate immediate emergency shut downs of all process units. During the emergency shut down of the FCC, the opacity from the CO Boiler and the bypass stack exceeded the 20% opacity intermittently. Following the unit shutdown, it became necessary to use the Air Blower and Bypass Stack in order to remove the catalyst from the Regenerator, which led to additional opacity from the bypass stack.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status, which brought the opacity from this unit back into compliance.	Yes	9/20/2022	10/7/2022
P803 - Reformer 3	**Citation: P803: Part C.24.b)(1)k, b)(2)j. [40 CFR Subpart NNN (60.662(a)]** reduce emissions of TOC (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater. (b) combust the emissions in a flare that meets the requirements of 40 CFR 60.18	X		Continuous Monitoring	9/20/2022	9/20/2022	The vent stream was not controlled by a flare that meets the requirements of 40 CFR 60.18 or introduced into the flame zone of a boiler as required	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the refinery fuel gas system shutting down. All gas usually recovered by the refinery fuel gas compressors was routed to the hydrocarbon flares, which was smoking and not in compliance with 40 CFR 60.18 until the Reformer 3 was shut down.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. The hydrocarbon flares were needed to be used during the shutdown of all of the Refinery units until the Refinery was in "safe part" status. When the Reformer 3 unit was shut down this vent was no longer in service.	Yes	9/20/2022	10/7/2022
P010 - Crude/Vac 2	**Citation: P010: Part C.14.b)(1)h., and b)(2)g, c)(1)b [40 CFR 60 Subpart NNN (60.660(d)(1) referring to 40 CFR Part 65, Subpart D (65.63(a)(2)]** reduce emissions of TOC (less methane and ethane) by 98 weight-percent, or to a TOC (less methane and ethane) concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen, whichever is less stringent. If a boiler or process heater is used to comply with this paragraph, then the vent stream shall be introduced into the flame zone of the boiler or process heater. (b) combust the emissions in a flare that meets the requirements of 40 CFR 60.18	X		Continuous Monitoring	9/20/2022	9/20/2022	The vent stream was not introduced into the flame zone of a process heater or boiler for control	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the Refinery fuel gas system shutting down. Therefore the vent stream was not introduced into a flame zone of a process heater or boiler for control as required.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. When the Crude/Vac 2 was shut down this vent was no longer in service.	Yes	9/20/2022	10/7/2022

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

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		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P010 - Crude/Vac 2 **P011** - Crude/Vac 1	**Citations: P010: Part C.14.b)(1)b, b)(2)a, f)(1)a, P011: Part C.15.b)(1)b, b)(2)b., f)(1)a. [OAC 3745-18-54(W)(2)]** The SO_2 emissions from this emissions unit shall not exceed 0.40 pound per ton of actual process weight input. Compliance is demonstrated by venting the process vapors produced at this emissions unit into the refinery fuel gas system or to the flare gas recovery system where the process gas is treated in the amine system.	X		Venting to the flare gas recovery system	9/20/2022	9/25/2022	The process vapors produced at this unit are required to be vented to the flare gas recovery system to demonstrate compliance with the limit of 0.40 lb SO_2/ton of actual process weight input.	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the Refinery fuel gas system shutting down. The flares exceeded 500 lbs SO2/ 24-hr period starting on 07:00 on 9/20/2022 until 9/25/2022 at 13:00 hour, excluding a period on 9/23 and 9/24 where the emissions were closer to 400 lb SO2/ 24-hr. BP is reporting this as a deviation as it is assumed to be credible evidence it may not have been in compliance with the requirement to meet the limit of 0.40 lb/ton during this time period.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. When the Crude units were in safe park status, it is assumed that this deviation ended.	Yes	9/20/2022	10/7/2022
P003/ P004 - East and West Hydrocarbon Flare	**Citation: P003/P004, Part C.40.b)(2)d. [40 CFR 60.103a.(h)]** The permittee shall not burn in any affected flare any fuel gas that contains H_2S in excess of 162 ppmv determined hourly on a 3-hour rolling average basis. The combustion in a flare of process upset gases or fuel gas that is released to the flare as a result of relief valve leakage or other emergency malfunctions is exempt from this limit.	X		Continuous Monitoring System	West Flare 9/20/2022 at 03:00 hours East Flare 9/20/2022 at 03:00 hours	West Flare 9/21/2022 at 08:00 hours East Flare 9/30/2022 at 24:00 hours	East Flare - H_2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for two hundred and forty three (243) 3-hour averages during a flaring event West Flare - H2S emissions exceeded 162 ppmv on a 3-hour rolling average basis for twenty nine (29) 3-hour averages during a flaring event	A leak from an exchanger caused the Refinery to shut down the Sat/Gas Plant, which led to a large amount of process gas to be sent to Flare Gas Recovery (FGR). FGR compressors were overloaded such that high H_2S gas was sent to the hydrocarbon flares. Later that day, a Refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the Refinery fuel gas system shutting down. All gas usually recovered by the Refinery fuel gas compressors was routed to the flare such that high H2S gas was sent to the flares.	Following the fire, the Refinery initiated an immediate shut down of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. Once the Refinery shutdown was complete and the units were in "safe park" status, process gas needing to be flared was balanced to only one or the other flare, not both at the same time. This is an ongoing deviation and the refinery is working through repairs and corrective actions.	Yes	9/20/2022	10/7/2022
P003 - East Hydrocarbon Flare	**Citations: P003:** Part C.40.b)(1)b.,C.40.b)(1)e., C.40.b)(1)i., C.40.c)(1)c., C.40.c)(3)a No visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours,	X		Visual Observation	9/20/2022 at 07:00 hours 9/20/2022 at 09:00 hours 9/20/2022 at 11:00 hours 9/20/2022 at 15:00 hours 9/20/2022 at 17:00 hours 9/20/2022 at 19:00 hours	9/20/2022 at 09:00 hours 9/20/2022 at 11:00 hours 9/20/2022 at 13:00 hours 9/20/2022 at 17:00 hours 9/20/2022 at 19:00 hours 9/20/2022 at 21:00 hours	Visible emissions were observed during a flaring event for a total of approximately 80 minutes.	A leak from an exchanger caused the Refinery to shut down the Sat/Gas Plant, which led to a large amount of process gas to be sent to Flare Gas Recovery (FGR). FGR compressors were overloaded such that there were visible emissions observed from the flares. Later that day, a Refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the Refinery fuel gas system shutting down. All gas usually recovered by the Refinery fuel gas compressors was routed to the hydrocarbon flare system and there were visible emissions observed from the East flare.	Following the fire, the Refinery initiated an immediate shut down of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. Once all of the process units were shut down, and the incident was stabilized, the operators were able to control the visible emissions were able to be controlled with steam	Yes	9/20/2022	10/7/2022

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		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P004 - West Hydrocarbon Flare	**Citations: P004**: Part C.40.b)(1)b.,C.40.b)(1)e., C.40.b)(1)i., C.40.c)(1)c., C.40.c)(3)a No visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours,	X		Visual Observation	9/20/2022 at 03:00 hours 9/20/2022 at 07:00 hours 9/20/2022 at 09:00 hours 9/20/2022 at 11:00 hours 9/20/2022 at 17:00 hours 9/20/2022 at 19:00 hours 9/20/2022 at 21:00 hours 9/20/2022 at 23:00 hours 9/21/2022 at 01:00 hours 9/21/2022 at 03:00 hours	9/20/2022 at 5:00 hours 9/20/2022 at 9:00 hours 9/20/2022 at 11:00 hours 9/20/2022 at 13:00 hours 9/20/2022 at 19:00 hours 9/20/2022 at 21:00 hours 9/20/2022 at 23:00 hours 9/21/2022 at 01:00 hours 9/21/2022 at 03:00 hours 9/21/2022 at 05:00 hours	Visible emissions were observed intermittently during a flaring event for approximately 800 minutes.	A leak from an exchanger caused the Refinery to shut down the Sat/Gas Plant, which led to a large amount of process gas to be sent to Flare Gas Recovery (FGR). FGR compressors were overloaded such that there were visible emissions observed from the flare. Later that day, a Refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the Refinery fuel gas system shutting down. All gas usually recovered by the Refinery fuel gas compressors was routed to the flare and there were visible emissions observed from the flare.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. Once all of the process units were shut down, and the initial incident was stabilized, the operators were able to control the visible emissions were able to be controlled with steam.	Yes	9/20/2022	10/7/2022
P003/ P004 - East and West Hydrocarbon Flare	**Citation: P003: Part C.40.b)(1)c [40 CFR 63 Subpart CC (63.644(a)(2))]** *[Note: there is not a specific Title V reference to the following requirement]* **[40 CFR 63.644(a)(2)]** Where a flare is used on and after January 30, 2019, the requirements of §63.670 shall be met. **[40 CFR 63.670(e)]** For each flare, the owner or operator shall operate the flare to maintain the net heating value of flare combustion zone gas (NHVcz) at or above 270 British thermal units per standard cubic feet (Btu/scf) determined on a 15-minute block period basis when regulated material is routed to the flare for at least 15-minutes. *[Also reported in Part B-tbl 3 - RSR Deviation]*	X		Continuous Monitoring System	9/20/2022 at 14:15 hours	9/20/2022 at 14:30 hours	The combustion zone net heating value of the flare was measured less than the required 270 BTU/SCF for one (1) 15-minute quadrants during a flaring event.	A leak from an exchanger caused the refinery to shut down the Sat/Gas Plant, which led to a large amount of process gas to be sent to the flare and the variability in heat content. The variability was such that operations could not control the steam/natural gas purge in time to avoid this exceedance.	Operations adjusted the steam and natural gas purge to increase the NHV above the limit.	No	No	No

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P011 - Crude/Vac 2, **P017** - Coker 2, **P025** - WWTU, **P036** - Coker 3, **P021** - Alky 1, **P022** - Alky 2, **P023** - Alky 3, **P028** - ADHT, **P029** - BGOT, **P041** - Iso 2, **P043** - Cat Poly	**Citations: P011:** Part C..15.b)(1)i, b)(2)h; **P017**: Part C.17.b)(2)e., C.17.b)(2)h, **P025**: Part C.18.b)(2)c., C.18.c)(3)z., C.18.f)(2)c., **P036**: Part C.19.b)(2)e., C.19.c)(2)a., **P021, P022, P023:** Part C.37.b)(2)b., C.37.b)(2)e., **P028, P029:** Part C.38.b)(2)e., **P041, P043**: Part C.39.b)(2)b., C.39.b)(2)e., **[40 CFR 63 Subpart CC, 63.643(a)(1), Ref Subpart A, 40 CFR 63.11(b)]** The vent that is considered a Group 1 miscellaneous process vents comply with the applicable emission limits and operating requirements of 40 CFR Part 63, Subpart CC by reducing the emissions of organic HAP's using a flare that meets the requirements of 40 CFR 63.11(b) of Subpart A.	X		Continuous Emissions Monitoring	9/20/2022	9/21/2022	The flare controlling the Miscellaneous Group 1 process vent per Subpart CC were vented to a flare that did not meet the requirements of 63.670(c).	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the refinery fuel gas system shutting down. When the flare gas recovery compressors were not able to be used, these vents became subject to the control requirements for Group 1 Miscellaneous Process vents of 40 CFR 63 Subpart CC. During this time period, the flares were not in compliance with 40 CFR 63.670(c)	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in "safe park" status. Once all of the process units were shut down, and the initial incident was stabilized, the operators were able to control the visible emissions were able to be controlled with steam	Yes	9/20/2022	10/7/2022
P025 - Refinery WWT System	**Citations: P025**: Part C.18.b)(1)c., b)(2)c.**[OAC 3745-21-09(UU)(4)]** All process wastewater from the crude desalter shall be discharged to a steam stripper for the recovery of condensable hydrocarbons, and all VOC emissions from the steam stripper shall be vented to a flare that complies with the requirements of OAC rule 3745-21-09(DD)(10)(d) to 3745-21-09(DD)(10)(f). **Citations: P025**: Part C.18.b)(1)c., b)(2)c. **[40 CFR 61 Subpart FF, 61.349(a)(2)(iii)]** Flares used to comply with 40 CFR 61 Subpart FF shall comply with the requirements of 40 CFR 60.18.	X		Continuous Monitoring	9/20/2022	9/21/2022	The benzene strippers were vented to a flare that was not in compliance with the underlying regulation. Visible emissions were observed.	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the refinery fuel gas system shutting down. During this time period, the flares intermittently smoked which is not compliant with the requirements of OAC 3745-21-09(DD)(1)(e) and 40 CFR 40 CFR 63.11(b).	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in "safe park" status. Once all of the process units were shut down, and the incident was stabilized, the operators were able to control the visible emissions were able to be controlled with steam	Yes	9/20/2022	10/7/2022
T164 - FR 500295 **T170** - FR 500294	**Citations: T170:** Part C.31.b)(2)b., C.31.c)(1)o., C.31.d)(3)c, **[OAC 3745-21-09(L), 31-05(A), 40 CFR 60 Subpart K, 40 CFR 61 Subpart FF, 61.349(a)(2)(iii), 61.349(d)]** This emission unit shall be equipped with a closed vent system controlled by the Hydrocarbon Flare System (P003 and P004) meeting the requirements of 40 CFR 60.18.	X		Visual Observation	9/20/2022	9/21/2022	These tanks were vented to a flare that was not in compliance with 40 CFR 60.18 requirements that there be no visible emissions.	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the refinery fuel gas system shutting down. During this time period, the flares intermittently smoked which is not compliant with the requirements of 40 CFR 60.18.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in "safe park" status. Once all of the process units were shut down, and the incident was stabilized, the operators were able to control the visible emissions were able to be controlled with steam	Yes	9/20/2022	10/7/2022

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
B008 - Iso 2 Feed Heater; **B009** - Iso 2 Stabilizer Reboiler; **B010** - Iso 2 Splitter Reboiler;	Citation: B008, B009, B010: Part C.33.b)(2)b., c)(2), f)(1)a); 40 CFR 60.104(a)(1) The permittee shall not burn in this emissions unit any refinery fuel gas that has a volume-weighted, rolling 3-hour average H2S concentration greater than 0.10 grain per dry standard cubic foot, except during periods of startup, shutdown or malfunction of the refinery fuel gas amine systems provided that the Refinery shall to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practices for minimizing emissions.	X		Continuous Monitoring System (CEMS)	9/20/2022 at 22:00 hours	9/21/2022 at 12:00 hours	The East Fuel Gas Mix Drum exceeded the 162 ppm H_2S limit for fourteen (14) 3-hour averages.	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the refinery fuel gas system shutting down. All RFG was routed to the flare gas recovery compressors, which were overloaded such that untreated high sulfur refinery fuel gas was sent through the East Fuel gas mix drum.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. When the units were in safe mode, this deviation ended.	Yes	9/20/2022	10/7/2022
B015 - Crude 1 Furnace; **B017** - Coker 2 Furnace; **B022** - Naphtha Treater Furnace; **B031** - Vac 1 Furnace; **B034** - East Alstom Boiler **B029** - DHT A-Train Furnace	**Citation: B015 Part C.1.b)(1)b, f)(1)b, B017 & B022 Part C.34.b)(1)b, f)(1)b, B029 Part C.3.b)(1)c, f)(1)k, B031 Part C.4.b)(1)c, f)(1)a. B034 Part C.36.b)(1)c, f)(1)a.** [OAC 3745-17-07(A)] Visible particulate emissions (PE) shall not exceed 20% opacity as a 6-minute average, unless otherwise specified by the rule.	X		Visual Observation	9/20/2022 at 18:00 hours	9/20/2022 at 19:00 hours	Visible emissions were observed from the stack of these heaters and boilers and it is assumed that 20% opacity was exceeded as a 6-min average	Certain heaters and boilers that normally fire RFG and NG received liquid fuel believed to be Naphtha for a period of time before they were shut down. Visible emissions were observed from the stack for an unknown period of time between 18:00 hours and 19:00 hours.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. This deviation ended as the units were shut down.	Yes	9/20/2022	10/7/2022
B015 - Crude 1 Furnace; **B017** - Coker 2 Furnace; **B019** - Crude Vac 2 Furnace; **B022** - Naphtha Treater Furnace; **B030** - DHT-B Train Furnace; **B031** - Vac 1 Furnace; **B032** - Coker 3 Furnace; **B033** - East BGOT Furnace; **B034** - East Alstom Boiler; **B029** - DHT A-Train Furnace	**Citation: B015 Part C.1.c)(1), B019 Part C.2.c)(1), B029 C.3.c)(1), B031 C.4.c)(1), B032 C.5.c)(1), B017 & B022 C.34.c)(1), B030 & B033 C.35.c)(1), B034 C.36.c)(1) [OAC 3745-17-07(A)(1)]** The permittee shall only burn natural gas, refinery fuel gas or liquefied petroleum gas (LP gas) in this emissions unit.	X		Continuous Monitoring	9/20/2022	9/20/2022	During an upset on September 20th, it is believed liquid fuel was in the Refinery Fuel Gas system. This is not natural gas, refinery fuel gas or LP gas as required.	Certain heaters and boilers that normally fire RFG and NG received liquid fuel believed to be Naphtha for a period of time before they were shut down.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. This deviation ended as the units were shut down.	Yes	9/20/2022	10/7/2022

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P009 - SRU1	**Citation: P009 Part C.13.b)(1)f., b)(2)g, f)(1)b. [40 CFR 60.104(a)(2)(i) and 40 CFR 63.1568(a)(1)(i), and per CD - subject to NSPS Ja - citation 40 CFR 60.102a(f)(1)(i)]** The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant containing in excess of 250 ppm SO2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average. ***Note:*** *this is a Title V Deviation only. This is not a deviation of 40 CFR 60 Subpart J standard pursuant to 40 CFR 60.8(c), which states: emission limit during periods of startup, shutdown, and malfunction be considered a violation of the applicable emission limit unless otherwise specified in the applicable standard.*	X		Continuous Monitoring System (CMS)	9/24/2022 at 16:00 hours	10/1/2022 at 00:00 hours	The SO_2 concentration at the SRU1 Thermal Oxidizer exceeded the required 250 ppmv SO_2 for over a 12-hour period for a total exceedance of one hundred and fifty two (152) 12-hr average periods	Following the fire on September 20th, the Refinery restarted the shutdown process for the Sulfur Recovery Unit #1 (SRU1). As a result of the shutdown, the SO_2 concentration exceeded the 250 ppm 12-hr rolling average.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. The SRU shut down procedures were followed during this shutdown. The procedure development included evaluating ways to minimize emissions during the shutdown process. During the shutdown, operations made every attempt to minimize excess emissions consistent with safety and good air pollution control practices.	Yes	9/20/2022	10/7/2022
P037 - SRU2/3	**Citation: P037 Part C.20.b)(2)h., d)(11)b, f)(1)i. [40 CFR 60.104(a)(2)(i) and 40 CFR 63.1568(a)(1)(i) [per CD - subject to NSPS Ja - citation 40 CFR 60.102a(f)(1)(i)]** The permittee shall not discharge or cause the discharge of any gases into the atmosphere from the Claus sulfur recovery plant with an oxidation control system or a reduction control system followed by incineration, in excess of 250 ppm SO2 by volume (dry basis) at zero percent excess air as a rolling, 12-hour average. ***NOTE:*** *this is a Title V Deviation only. This is not a Deviation of 40 CFR 60 Subpart Ja, pursuant to 40 CFR 60.8(c), which states that emissions during startup, shutdown, and malfunction shall not be considered a violation of the applicable emissions limit unless otherwise specified in the applicable standard.*	X		Continuous Monitoring System (CMS)	9/24/2022 at 18:00 hours	9/30/2022 at 21:00 hours	The SO_2 concentration at the TRP SRU Thermal Oxidizer exceeded the required 250 ppmv SO_2 for over a 12-hour period for a total exceedance of one hundred and forty seven (147) 12-hr average periods	Following the fire on September 20th, the Refinery restarted the shutdown process for the Sulfur Recovery Unit #2/3 (SRU2/3). As a result of the shutdown, the SO_2 concentration exceeded the 250 ppm 12-hr rolling average.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status. The SRU shut down procedures were followed during this shutdown. The procedure development included evaluating ways to minimize emissions during the shutdown process. During the shut down, operations made every attempt to minimize excess emissions consistent with safety and good air pollution control practices.	Yes	9/20/2022	10/7/2022

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P050 - TRP Acid Gas Flare	**Citation: P037 Part C.20.c)(1) [OAC rule 3745-31-05(A)(3) PTI P0119763 issued 10/30/2015]** A pilot flame shall be maintained at all times in the TRP Acid Gas flare's (P050) pilot light burner.	X		Continuous Monitoring	9/20/2022 at 21:14 hours	9/20/2022 at 23:06 hours	The pilot flame on the TRP acid gas flare was not present	Pilots to the TRP Acid Gas flare were not present due to the loss of natural gas supply during the response to the Refinery fire on September 20th. The pilots were able to be temporarily re-lit during the incident and then were later extinguished again for approximately 48 hours to complete repairs; however, the emissions units that are connected to this flare (SRU2 and 3) were not in operation during this period Flow monitors indicate that there was material being sent to the TRP Acid Gas flare at the time of the outage. There was no feed in the unit at the time, but it is believed this was similar material to Acid Gas.	Emergency repairs were completed to enable re-lighting of the pilots.	Yes	9/20/2022	10/7/2022
P017 - Coker 2	**Citation: P017: Part C.17.b)(1)a [OAC rule 3745-31-05(A)(3) PTI 04-945 issued 4/26/1995)]** 18.3 tons per year of volatile organic compound (VOC) emissions (from coke cutting and equipment leaks 4.1 pounds of VOC per coking cycle from the hydrocarbon flare system 1.3 tons per year VOC from the hydrocarbon flare system 109.5 pounds of sulfur dioxide (SO2) per coking cycle from the hydrocarbon flare system 34.3 tons per year SO2 from the hydrocarbon flare system	X		Various	9/20/2022	9/20/2022	The process vapors produced at this unit are vented to the flare gas recovery system to demonstrate compliance with the limit of 109.5 lbs SO_2 per coking cycle.	A refinery fire in the area of the Crude/Vac 1 unit and TIU Mix drum led to the refinery fuel gas system shutting down. During this time period, the flares intermittently smoked which is not compliant with the requirements of 40 CFR 60.18.	Following the fire, the Refinery initiated an immediate shutdown of all processing feeds. Once the fire was extinguished, the Refinery began a longer shutdown process to deinventory and purge units until the Refinery was shut down and all Refinery units were in “safe park” status.	Yes	9/20/2022	10/7/2022
P007 (FCC/CO Boiler)	**Citation: P007 Part C.12.d)(5)b [PTI 04-01330 issued (6/27/2006), 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]** The permittee shall operate and maintain equipment to continuously monitor and record SO2 emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 6		X	Continuous Monitoring System	7/1/2022	9/30/2022	> 5% downtime for the FCC bypass SO_2 monitor	During the startup of the FCCU, the Refinery contracted a third party vendor to monitor the bypass stack CEMs. The third party was monitoring the data remotely and their system did not flag missed calibrations which led to a significant amount of downtime. Given the short duration of use during the quarter, this downtime resulted in greater than 5% downtime for the quarter.	the Refinery is seeking alterative companies with improved technology for future known bypass stack events in order to prevent downtime and enable better communications with the Refinery systems.	No	No Report	No Report

(PART C) Emissions Unit Terms and Conditions (Permit Requirement Reporting) - Deviation Reporting (Table 2)

THERE WERE NO DEVIATIONS OF ANY OF THE TERMS AND CONDITIONS OF Section C OF THE TITLE V PERMIT DURING THE REPORTING PERIOD SPECIFIED IN THIS REPORT

Add rows as necessary to the following table for reported deviations (one for each Term as applicable; see detailed instructions for more information)

EMISSIONS UNIT (EU) NUMBER & DESCRIPTION (See below)	TITLE V PERMIT TERM NO & DESCRIPTION	Reporting		ACTUAL METHOD USED TO DETERMINE COMPLIANCE	DEVIATION			PROBABLE CAUSE FOR THE DEVIATION	CORRECTIVE ACTIONS / PREVENTATIVE MEASURES TAKEN	WAS DEVIATION ATTRIBUTABLE TO A MALFUNCTION?	MALFUNCTION VERBAL REPORT DATE (If no reports were	MALFUNCTION WRITTEN REPORT DATE (If no reports
		Qtr.	Semi-Annual		DEVIATION DURATION Date / Time Start	DEVIATION DURATION Date / Time End	DESCRIPTION AND MAGNITUDE OF THE DEVIATION					
P007 (FCC/CO Boiler)	**Citation: P007 Part C.12.d(7)b [PTI P0105902 issued 5/18/2011, 40 CFR 60.13 and 40 CFR Part 60, Appendices B & F]** The permittee shall operate and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.		X	Continuous Monitoring System	7/1/2022	9/30/2022	> 5% downtime for the FCC bypass NOx monitor	During the startup of the FCCU, the Refinery contracted a third party vendor to monitor the bypass stack CEMs. The third party was monitoring the data remotely and their system did not flag missed calibrations which led to a significant amount of downtime. Given the short duration of use during the quarter, this downtime resulted in greater than 5% downtime for the quarter.	the Refinery is seeking alterative companies with improved technology for future known bypass stack events in order to prevent downtime and enable better communications with the Refinery systems.	No	No Report	No Report